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ABSTRACT

The cable television situation in New Jersey, particularly as it pertains to the educational potential of the medium is disucssed in this brief document. The stated purpose of the report is to inform New Jersey citizens of some of the options and opportunities that remain open to them in developing municipal cable television systems that are accessible to and service the needs of the community. The report reviews the franchising situation, with emphasis on the alleged misuses that have occurred, and the legal basis of the cable television regulations. Recommendations presented deal primarily with writing and preparing the franchising contract. (MC)

PERSPECTIVE

CABLE T.V.

educational medium of the future?

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CABLE T.V. -
EDUCATIONAL MEDIUM OF THE FUTURE?

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INTRODUCTION

Cable television has become a most pressing public policy issue. With the passage of the New Jersey Cable Television Bill, New Jersey became the sixth state to regulate a potentially revolutionary educational medium. The classroom of the future is likely to be transformed beyond recognition by the expanded use of CATV, and other media developments such as video cassettes and dispersed computer terminals. Learning in the future will take place at home, in offices and community centers. The possibilities are dramatic.

Of the policy issues raised by the new technologies, the questions surrounding cable television are most crucial. It was demonstrated in the report of the New Jersey Legislative Study Commission on CATV that the conflict between private and public interests in this industry can become acute. The public schools, for all of their difficulties, have a tradition of public control and public responsibility. In recent years, this strength has been eroded in part through the growth of strong private associations devoted to the pursuit of the special interests of various members of the school community. These organizations of teachers, administrators and others find it difficult at times to identify the public interest with their own objectives. The issue of CATV raises another serious threat to public control of public education: The private cable companies, if not controlled and regulated, will also jeopardize our tradition of public control.

This report, the fifth of our "Perspectives" on education issues, is an attempt to inform New Jersey citizens of some of the options and opportunities that remain open to them. However, the time for action is short. Too many contracts which do not maximize opportunities for public access and community involvement have already been written. Mary Lou Armiger and Nathan Shoehalter explain in the report that follows how public benefits have been lost, and provide specific guidelines for drafting a sound, community oriented contract.

With the passage of the Cable Television Bill, an office of Cable Television was established with the Public Utilities Commission. This office will be writing guidelines in the next few months which hopefully will maximize public education opportunities. We hope that this report will be a step toward this objective, and will energize educators and other citizens to become involved in framing contracts in their own communities.

Stanley J. Salett
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THE ISSUE OF CABLE TELEVISION

One hundred years ago, the telephone was perhaps the most misunderstood and underestimated invention in the world. Often referred to as "Bell's scheme," the telephone was seen as having little practical value to society. In the 1870's, when Alexander Graham Bell proposed placing his invention "in every home and business house," Western Union's special committee to evaluate the instrument proclaimed, "any development of the kind and scale which Bell so fondly imagines is utterly out of the question."

Today, we view this slice of history with both irony and amusement. The telephone has become a vital yet commonplace part of everyday life. In New Jersey, 90% of the population owns a residential telephone, and for those who do not own one, there are numerous public telephones available for less than the price of a cup of coffee. As a common carrier the telephone provides easy access and private communication. Because of its common carrier characteristic the telephone is regulated by the Public Utilities Commission, yet on the stock market a telephone company is a solid and valuable commodity.

Now, well into the second half of the twentieth century, America is confronted with another instrument with the potential for radically changing our daily lives: the nation is gradually being rewired for cable television.

The coaxial cable, the conduit of cable television's signal, is remarkable for its tremendous capacity for carrying information--about 10,000 times greater than a household telephone line. Engineers, technicians, entrepreneurs, and special interest groups have described the coaxial cable as "the electronic highway of the future," and have begun to take steps to avoid a repetition of the underestimation of the telephone.

Cable television, however, faces a more serious problem than underestimation of its potential. The burgeoning medium is in danger of being primarily controlled by industrial and governmental forces, with little input from the public in general. The reasons for this emerging pattern are as complex as the social policy forces which operate in our society, and the fault lies with the public certainly as much as the industry or the government. The public must recognize its responsibility to understand its rights, privileges, and obligations regarding cable television, and educators should play a leading role in this effort.

WHAT IS CABLE TELEVISION?

The Beginning

In 1949, not long after conventional television made its major breakthrough into the American market, a local television dealer in a small Pennsylvania town noted that his business was suffering due to the poor reception in thea rea. The mountainous terrain was preventing broadcast signals from being received on home television sets. Combining ingenuity with sound business techniques, the dealer erected an antenna on a nearby mountain. The antenna picked up television channels from Philadelphia, sixty miles away, and fed the signals into the town via cable, producing remarkably clear pictures. Using improvised equipment and feeder lines, he made available the "purloined channels" to the town residents for an installation fee of $125.00, and a monthly service charge of $3.00.[1] Consequently people started buying his television sets, and Community Antenna Television (known more frequently today as CATV or Cable TV) was born.

Later, CATV systems were built to provide additional channels and wider choice of network programming for communities which had satisfactory television reception but were low-band systems with only one or two channels. Big-city television began to benefit from Cable TV, as well. The steel and concrete towers of Manhattan interfere with reception to the same extent as the mountains of Pennsylvania.

The Concept

The concept of Cable TV is technologically a simple one. CATV systems provide microwave relays or a "super" antenna to pick up broadcasted signals. The signals are processed by a "head end," the electronic control center which amplifies, filters, and converts the signals to the appropriate cable system channels. Signals are then carried by the coaxial cable, which is about the thickness of a fountain pen, along telephone poles or city ducts to the home television sets of subscribers by a house "drop." Installation fees are usually approximately $15-$30,and monthly subscription rates average about $5.00.

If Cable TV were merely a conduit for standard over-the-air broadcast programs, it would not be heralded as a revolution in communications and be of imminent concern to educators. However, not only has CATV transmitted broadcast signals better than the old media, but the role of television has been widely expanded from its traditional limitations by the use of the coaxial cable.

A television broadcaster is assigned a block of bandwidth (a unit which describes the capacity to convey information) by the Federal Communications Commission and a carrier frequency (channel number) for transmission over the air. Because a television signal with its associated sound takes up a large amount of bandwidth, there are only a small number of channels which can go on the air in any one area.

Long ago, the F.C.C. allocated blocks of bandwidth in the Very High Frequency (VHF) band of the spectrum for the exclusive use of television broadcasting. There is a theoretical capacity for twelve channels within this band (channels 2 through 13). Unfortunately, in practice, adjacent channels in the same area interfere with each other. Therefore, the real VHF channel capacity is a maximum of seven, as in New York and Los Angeles.

In 1952, responding to the limitations of VHF channel assignment, the F.C.C. opened a new band of frequencies to television–the Ultra High Frequency (UHF).[2] The UHF region of the spectrum meant the possibility of seventy additional channels; however, through a combination of technical and economic disadvantages, UHF television has never gotten off the ground.

Thus, the actual channel capacity of the over-the-air television system is low. The average number of channels available in 86 out of 100 of the United States is 3.4.[3]

The Advantages

Cable television is not restricted by the paucity of over-the-air channels. Because the signals are contained within the system's cables, the channel capacity of CATV is limited only by the bandwidth capability of the cable equipment itself. Twelve-channel systems have become common, and to build a system of 20 channels is not only technically feasible but relatively facile. In Akron, Ohio, installation is proceeding on a 64-channel system. Many experts believe that the addition of another cable could easily expand the capacity to 100 channels.

High channel capacity makes possible a great variety of programming. Not only can CATV televise programs that otherwise are not available, but local programs, such as political debates, sporting events, and educational activities can be produced. With 20-100 channel capacities, specific channels can be set aside for public use, and entertainment becomes only a portion of the CATV capabilities.

Because production costs are lower, television programming may no longer be limited to the very wealthy. Telecasting of political debates, advertising, and the news might be tailored to the local community. The often prohibitive cost of television political campaigning may be cut drastically through the use of CATV. Many state legislators, city councilmen, school board members, and school superintendents could reach the local population through Cable TV. Specialized training programs for vocational trades, continuing education, universities without walls, in addition to televised town meetings, classroom activities, and school board meetings, can all be transmitted to the home viewer.

Within the casing of the coaxial cable is also the capability of bi-directional communication. If the system is wired for transmission in both directions, the viewer can communicate back to the source via the receiving cable. This feature offers unlimited benefits, especially for education. Consider, for example, the homebound or hospitalized student who not only watches classroom activities on television but can participate through the two-way terminal. Home study courses become more meaningful with the bi-directional component. To date, terminal keyboards have been designed with three to fifteen keys, depending on the amount of response data required by the subscriber. The simplest three-key unit is basically for responding to questions with "yes," or "no" or "no answer." In its most complex form, the two-way terminal can send complete alpha-numeric,audio, and visual signals.[4]

As a delivery system, Cable TV is not limited to television programs. Printed material can be converted into electronic signals (known as "facsimile reproduction") to be delivered by the coaxial cable. For example, a nationally interconnected network of Cable TV systems would be able to carry large volumes of non-private mail via electronic transmission. Newspapers could also be reproduced over cable television. Digital addressing techniques are also possible to send an exclusive message to a particular receiver. By hooking up with computer data banks, material can be stored and summoned when desired by the receiver.

Educational Possibilities

The potential capabilities of Cable TV for education are bounded only by the imagination. Schools which already have begun utilizing educational television can provide programs via cable on a more flexible basis which need not conform to broadcast schedules. Formal instructional programs (ITV) can be broadened on cable television to include a more diversified range of subjects aimed at a more specialized audience. With the feedback component students can interact with the teachers and other students.

Cable television provides the opportunity for students to participate actively in both the art and the science of communication. Minority groups, special interest groups, ethnic groups, and so on can candidly discuss issues with the public via cable. In addition, students can be trained in the technical and production aspects of telecasting by participating in work-study programs within the local cable studio.

As mentioned earlier, homebound or hospital-bound students can be reached with selected programs via CATV. Likewise, early childhood education programs and senior citizen programs can be piped into the home with cable television. Programs and activities occurring at one school, or group of schools, can be transmitted to another school. In

addition, schools can literally bring to the classroom any resource within the community, and as satellites provide national cable networks, local communities can bring in distant resources. Colleges and universities can use the cable system for much the same purposes as local schools.

Community Involvement

Education need no longer be limited by the walls of the school buildings, and with the aid of Cable TV the cost of classroom education need not skyrocket. It must be emphasized, however, that cable television is a tool, an instrument to be used for the benefit of society. It is not a replacement for direct personal contact, nor is it a panacea for the mounting problems of education. Cable television, like the telephone, is another medium of communication whose success depends upon how effectively it is used. *Whether CATV benefits the public depends upon whether the public participates in its functioning, to what extent it participates, and how effectively it participates.*

There can be no doubt that the potential of Cable TV is powerful; however, to date most of this potential is unrealized or abused. The infant industry of CATV has been struggling in a tangled political framework and a confused regulatory situation. In this power struggle the educators of the nation, and the public-at-large, have remained largely silent and non-demanding.

It is extremely important that the educational community recognize and understand the future impact of cable television while policy decisions are still being made. It would be sad, indeed, if educators began demanding rights and privileges ten years hence, when precedent had been established and policy determined. Currently, Cable TV is still in a developmental stage, and educators assist in actually creating the precedents and the social policies surrounding cable television. Moreover, the academic community should also assume a responsibility for educating the general public on its rights, privileges, and obligations relating to Cable TV.

FRANCHISES

There are currently more than 2,750 Cable TV systems in operation in this country with several hundred more under construction. The average system serves approximately 2,100 subscribers although large systems, such as New York City, serve over 70,000.[5] Industry spokesmen estimate that by 1980, Cable TV will reach between 30 per cent and 60 per cent of all television sets in the country.

Franchises for the cable network are awarded to cable operators by local municipal authorities. Although early cable television attracted only local

entrepreneurs, in the 1960's, multiple system operators such as TelePrompTer, H and B American, and Cox Communications began to dominate the field. By 1970, the trend toward big business in CATV accelerated. Moreover, broadcast television networks, telephone companies, newspapers, local television stations, and major magazine companies had bought a substantial portion of the Cable TV franchises across the country. Although Federal action has limited communication interest companies from acquiring a total monopoly, only networks have been prohibited from expanding into the cable industry.[6] Recently, there have been some examples of universities becoming cable operators.[7] Citizen groups have also become involved in the ownership of cable franchises. The problems of such a venture are numerous, however. The most obvious obstacle to a municipal, state, or citizen owned cable system is the large initial capital outlay required to become operational.

Misuse of Franchises

It is unfortunate, however, that the majority of citizens, including municipal authorities and educators, award franchises to cable operators with little ability or inclination to make decisions in the community's interest. Few provisions, for example, has been made in most cable contracts for the myriad possibilities of educational and municipal services inherent in cable technology. Access to the system, including production facilities, by community interest groups has been hardly considered in most franchises. At the present time, the amount of service a community receives from Cable TV is largely a function of the market, not of the needs and requirements of the community.

In addition, the market has left itself open to scandal, graft, and extortion. For example, in 1971, a federal grand jury indicted the president of a major Cable TV company on charges of paying three public officials in Pennsylvania $15,000, for the Cable TV franchise in that town.[8]

This case was followed by a probe into the awarding of cable franchises in several New Jersey towns. Grand jury indictments were handed down against city councilmen, assemblymen, and state officials, as well as cable industry representatives. Although some of the defendants were acquitted , others were convicted. The New Jersey Assembly Committee on Transportation and Public Utilities held public hearings on April 20, 1971, to discuss a bill which would bring the cable industry within the state under the control of the New Jersey Public Utilities Commission. Testimony was presented which referred to numerous other attempts of bribery and extortion, further indicating the extent to which the industry had entertained corruption.

THE POWER TO REGULATE CABLE TV

There are three basic governmental sources of possible regulation on CATV: (1) The Local Municipality, (2) The State, and (3) The Federal Communications Commission. The application of the potential power of these agencies, however, has historically been shrouded in complexity and confusion.

The Municipal Government

Cable firms bidding for franchises typically prepare promotional materials and enter a few weeks of negotiations with municipal officials. Local officials, usually working on a part-time basis, often enter into agreements and contracts without the benefit of any training or outside technical assistance in studying complicated issues of communications technology and social policy. The result in many towns is the formal and legal surrender of control over a major public service for many years in the future. Sometimes, the general public is not even aware that a long term license to wire a community has been awarded, and the first notice the community receives of such a venture is a solicitation to subscribe to the cable system.

Franchise Deliberations

A recent study of cable television in New Jersey revealed that local franchise deliberations follow a typical pattern characterized by:[9]

1. *Lack of Competition.* The first company to bid was often the one selected. In many cases, cable companies which might have offered a superior service were denied the opportunity to bid, and the public's right to seek the best arrangement was ignored.

2. *Haste.* Local governing bodies acted quickly on the awarding of cable contracts, with little awareness of the policy issues presented by the new medium. "We found only two municipalities (Willingboro and West Orange) which studied in a thorough and professional manner. . .questions prior to awarding a franchise. If such a casual attitude attended the awarding of school construction contracts, officials would surely be charged with irresponsibility."

3. *Pressure on Small Towns.* "Whipsaw" tactics have been typically employed by cable companies who enter a geographic region by obtaining a franchise from the largest community in the area and subsequently inform smaller towns that other cable companies will not likely be interested in servicing their small population.

4. *No-Show Franchises.* Municipalities sometimes sign contracts with cable companies without provision for dates of development and operation. Numerous cable companies have used the franchise as a negotiable document of re-sale value without any immediate plans for operation. (Although some such companies encounter legitimate

obstacles to becoming operational, others are simply making a large profit at public expense.)

5. *Political Influence*. Cable companies often associate with local officials and persons with political influence. Sometimes political figures are principal members of cable companies.

Despite the array of potential services possible through cable television in the areas of politics, government, community involvement and education, the benefits can easily be lost. Many communities deny themselves the opportunities of the new medium through shortsighted local franchise agreements. Although most agreements provide a prevention clause from cable companies creating nuisances (e.g., unnecessary tree-top chopping), few contracts detail the technical requirements of the system, provide program guidelines, or allow provisions for public access.

Municipal Revenue from CATV

The key issue in competitive franchise proceedings is usually the amount cable firms pay local governments for the privilege of operating. Payments in New Jersey range from zero to seven per cent of the gross annual revenues of the system, with a five per cent figure the most common.[10] Cable operators often present this source of revenue as a major selling point, and local officials often prefer to discuss the issue to the exclusion of other matters. Usually there is no performance incentive attached to the structure of fees. A franchise which delays construction and operation of the system need not pay a penalty to the municipality which it has failed to serve; likewise, no bonus is given to the company which operates with speed and success or which upgrades its service and production output.

Although there is evidence that a well-managed cable company can recoup its initial investment within four to seven years, many communities obligate themselves to a franchise for periods in excess of ten years. Long-term agreements of over ten years increase the risks of a municipality by locking the population into one company whether it performs well or not.

Municipal governments are likely to scrutinize the rates charged by the cable companies to install the home drop and to continue monthly service. Unless there is provision in the contract for continued rate regulation by the community, the population may suffer eventually as the cable firm achieves a strong economic foothold on the community.

Municipal governments should also require specific levels of technical performance from cable companies. Of course, any cable firm which

intends to operate will recognize that the delivery of clear reception and good programming will maintain its customers, but the interest of the public should not be left to the good will of the private corporation. In addition, there should be some protection for less populated regions of the municipality to receive services, and there should be certain specified public buildings to be wired by the cable company gratis to the citizens (e.g., school buildings, libraries, town halls, hospitals).

Community Access

To the educator, one of the most noticeable areas of concern in most existing franchise contracts is the dearth of requirements for the numerous community broadcast services which are possible through CATV. The Center for Analysis of Public Issues, a non-profit research group based in Princeton, studied sixty-six New Jersey contracts of which forty-five contained no stipulation whatsoever to provide channel time to the community for public access broadcasting. In some communities, the cable systems offer amounts of time to the public, but such an agreement is hardly satisfactory. Only five agreements from the New Jersey sample required the firm to provide at least one educational channel, although the meaning of the channel requirement varies from town to town. South and West Orange stand out as the two communities with the most commendable contracts in this regard. South Orange requires the cable company to provide public schools with two channels along with the equipment needed to use them. In West Orange, the board of education is given-two channels, plus access to production facilities. Only four franchises in New Jersey require the company to produce and broadcast a certain amount of locally originated programming. The West Orange franchise, by contrast, requires the company to set aside nine channels, ". . .to be allocated for the developing services of: Newspaper print-out in the home, library retrieval of information, computer services, and Pay-Television and other services as permitted by the Federal Communications Commission and approved by the Town Council of the Town of West Orange."[11]

Some educational channels throughout the nation have become threatened by cable television. Although the F.C.C. rules state that cable systems must carry local educational channels, there is some feeling that if distant educational channels are carried as well as local, the audience will support the distant station. Dr. Lawrence T. Frymire, Executive Director of the New Jersey Public Broadcasting Authority, sees a positive liaison, however, between educational and cable television. The important impetus for such cooperation, he feels, is the local boards of education. School systems, he states, must "become deeply involved in the matter of local franchise development in New Jersey. This process would cause the city governments to plan how the cable systems in their area will provide

better educational coverage and therefore better education."[12]

There have been far too many examples of the inadequacies of municipal governments to regulate Cable TV. Numerous opportunities have been overlooked and too many abuses have been incurred. The public is the loser.

The Role of the State in CATV

The development of CATV has stretched across the boundaries of the local community and presents statewide policy issues. Few states appear concerned about the issue, however, perhaps expecting that the Federal Communications Commission would eventually establish all the controls necessary.

To date, only five states have enacted Cable TV regulations. With the new Cable Television Bill, New Jersey will be the sixth state to display an active concern for the public interest in cable television.

The five states which have regulated Cable TV have placed the industry within the scope of the state utilities commission although the specific regulations differ among the states. The five regulating states have been: Connecticut, Nevada, Rhode Island, Vermont, and Hawaii. Cable television companies are generally fearful of CATV being classified as a public utility; such a classification would limit company profits to the degree the state considers a fair rate of return on the investment.

New Jersey Regulations on Cable TV

The development of the cable industry in the State of New Jersey was first noted by Governor Richard J. Hughes in his 1965 Annual Message to the Legislature. He said, "We are presented with a classic example of the birth of a public utility with all of the attendant hazards to the consumer of unrestrained competition and service without prescribed standards."

In response to Governor Hughes' remarks, bills were introduced in the Legislature to give the Public Utilities Commission jurisdiction over Cable TV systems within New Jersey. The Public Utilities Commission (PUC) of New Jersey has taken the position of limiting its jurisdiction to the questions of fair rates and non-discrimination on the part of the telephone company over pole-attachment of the cable. The PUC has stated that it will not extend its position unless new legislation were enacted.

The New Jersey Assembly Committee on Transportation and Public Utilities held public hearings, in April, 1971, to determine whether the PUC should have jurisdiction over cable systems. The measure was not

acted upon by the lawmakers although it did receive the support of the Chairman of the Public Utilities Commission.

On July 29, 1971, the Bergen Record's lead headline charged, "Irresponsibility and Inaction' – CATV On Blink, Study Finds." The article cited the Center for the Analysis of Public Issues (CAPI) study on Cable TV. The essential finding of the study, according to the article, was that "the public is in danger of being exploited rather than served by cable television." Richard Leone, Director of CAPI, was quoted as saying, "CATV could become a valuable public resource, but the current pattern of official irresponsibility, primitive franchise provisions, and state inaction offers little hope for achieving that potential."

Largely as a result of the CAPI investigations revealing the discouraging status of cable television in the State, the New Jersey Legislature declared a moratorium on the awarding of new CATV franchises in June 1971. The purpose of the moratorium was to give various State agencies time to develop a comprehensive policy and recommend legislation which would regulate the industry and provide protection for the public. In a companion measure, a legislative study commission was established to examine CATV developments in the State and to recommend appropriate state regulations. (See Appendix I for more detail on the New Jersey Cable Television Bill.)

The Federal Communications Commission

The role of the Federal Communications Commission as a regulator of Cable TV has been an enigma. Its involvement in the operations of cable television has ranged from a 1959 ruling by the FCC stating that the commission accepted no jurisdiction to regulate Cable TV, to the latest 400-page document of rules and regulations regarding the medium.

By 1965, the Commission reversed its 1959 position. A "First Report and Order" was issued by the FCC and dealt with regulations regarding the microwave aspect of the system. Cable TV systems were prohibited from importing distant stations on the same day those programs were available locally over the air.

In 1966, the FCC imposed three restrictions on cable systems, until policy implications could be appraised further: (1) each CATV system was required upon request to carry the signals of all stations operating in its own area of coverage, (2) CATV's were required upon request not to duplicate the programming of any local station on the same day a given show was aired on the local station, and (3) except through special waiver of the rule by the Commission, cable systems in the top 100 markets (which reached some 89 per cent of the nation's television homes) were forbidden to import signals from distant stations into their prime recep-

tion area.[13] Again, the purpose of the 1966 restrictions was obviously to protect local television stations, especially the marginal UHF channels, rather than to create a clear regulatory framework for the new medium of cable television.

In 1968, the Commission proposed that the limitation on the importation of distant signals be imposed within a 35-mile radius of major market communities unless permission from the originating station had been obtained. A "Second Further Notice," in 1970, continued the 1968 requirement for retransmission consents.

Since the Second Notice, the FCC has imposed certain restrictions on the ownership of cable systems. The Commission ruled that telephone companies and independent and affiliated television stations are prohibited from CATV ownership within the locality in which they operate. In addition, the Commission strictly prohibited broadcast television networks from Cable TV ownership anywhere.

The FCC recently concluded extensive hearings on cable television which resulted in a report with updated regulations. The regulations were released in February, 1972, and became effective March 1, 1972. Experts are still wading through the lengthy 400-page volume. It is this document that has largely affected the working of the New Jersey Bill to regulate Cable TV, and that will greatly affect educators who hope to use cable television as a means of communicating educational ideas and materials. (See Appendix II for specific 1972 FCC regulations of particular concern to educators.)

CABLE TELEVISION IN NEW JERSEY

Background

In 1952, Atlantic County became the first county in New Jersey to introduce cable television when two systems in Ventnor and Atlantic City started operations. These towns on the Jersey shore were attracted by the features of Cable TV for much the same reason as the mountainous regions of Pennsylvania; that is, reception was poor for the few channels that could be picked up at all.

No new cable companies in New Jersey appeared until some twelve years later when systems in other far reaches of the State such as Bridgeton, Beach Haven, Wildwood, and Ocean City began laying cable. The last stations erected for cable transmission before the moratorium was imposed began operating in 1969.

Current Status

In the New Jersey Assembly Committee on Transportation and Public Utilities report concerning CATV systems it was noted that there are

approximately sixty companies which hold franchises in New Jersey but are not yet in operation. Applications for franchises which are still pending number over one hundred and cover practically every county in the State.

Richard Leone, Director of CAPI, testified in a public hearing on April 20, 1971 that over 146 New Jersey communities had signed contracts with cable operators and at least a hundred more were considering contract proposals. Leone pointed out to the Legislature that in contrast to franchise provisions in New York City, most New Jersey franchises do not insure access for educational groups, community groups and government. Only three New Jersey communities included any effective public access provision.

An informal survey conducted by the Rutgers University Bureau of Educational Radio and Television revealed that of the 26 currently viable cable systems presently providing service to their customers in New Jersey, only one-fifth are engaged in any kind of educational programming for school systems. Although many cable companies do carry broadcast signals of the educational stations in Philadelphia, New York, and the New Jersey Public Broadcasting Authority, such service should be in addition to, rather than instead of, local educational programming.

Many cable companies stated that they intend to produce local programming, including educational access, but that they are not in a position to do so now. Critics of the companies must consider the enormous costs involved in merely becoming operational. More important than the economic factor, however, is the cooperation given the cable system by the community. It is not enough for the public to demand access, facilities, and technical assistance without making a commitment itself to quality use of the system. Success or failure of community cable television depends on two-way cooperation between the cable company and the local community.

CATV-School Cooperation

Some areas of New Jersey are beginning to experience some form of cooperation between company and community. While mutual endeavors require persistent involvement of both the public and private sectors, some results are becoming apparent.

The Willingboro Schools

Willingboro Township Public Schools, for example, recognized the potential of school-to-home television, and established a relationship with the cable television franchise of their community several years ago. At first, school-to-home programming was limited to a program called "Coaches

Corner" which usually featured the high school coach discussing possible strategies for future games. In time, the schools produced a number of "specials" for groups of students, out-of-school adults, and parents.

Perhaps the most significant venture illustrating the cooperative relationship between Willingboro Schools and Cable Television of Burlington County was a show for pre-school children entitled, "Stepping Stones." The purpose of the series was "to develop some readiness for the school experience ahead, or, indeed begin the formal learning process before entering school." Using the district's allotment of Title I, ESEA, funds, Willingboro developed several programs geared mainly to reading readiness for three, four, and pre-school five-year-olds. Enlisting the help of two classroom teachers, the school district reading supervisor, the television teacher, and several consultants, the school system was determined to "make the series more than just entertainment or interesting viewing."[14] Willingboro also received assistance from the New Jersey Educational Improvement Center.

It is important to note that even in this early program effort, the Willingboro schools involved parents and "substitute parents" in the planning. production, and evaluation of the program. In the process of development the community learned to use the cable system as a medium of communication.

Following the success of "Stepping Stones," another pre-school series focused on mathematics was produced. For this program, called "Mission Discovery," additional Title I monies were obtained, and the series was able to avoid some of the problems experienced with "Stepping Stones." Walter Freas, the current Television Project Director of Willingboro Public Schools, cited in an interview the importance of obtaining expertise in cable production and community involvement as paramount.[15]

Willingboro continues to produce educational shows and to explore ideas for educational use of cable television. As it would in any community, transforming ideas to reality requires not only commitment from the community, the schools, and the cable company, but also time, expertise, and money.

The Fort Lee Schools

The Fort Lee Public School District has displayed active concern in its relatively new cable system provided by Vision Cable TV Company. The company has installed free hook-ups to the cable trunk line in school buildings, the fire hall, and the police department headquarters. The school district is buying television receivers to equip all schools in the

town with at least one television. While waiting for the equipment to arrive, the school system is conducting meetings of principals, teachers, community P.T.A. representatives, and central office administrators regarding the use of CATV by the schools. Fort Lee schools and Vision Cable, having arrived at a point of mutual respect and cooperation, agree that they now need assistance in bringing the two systems together in a mutually beneficial pilot project.

Wayne-Pompton Lakes Schools

Cable programs in some regions, such as Wayne-Pompton Lakes, feature local news filmed and reported by high school students. In addition, two high schools in the area have charge of weekly television shows, one of 15-minute duration and one lasting a half-hour. Microcable, the company serving the region, does not charge for educational or community use of its facilities or studio.

Responsibility of Educators

Promoting community programming and involvement is not solely the responsibility of cable companies, however. Some cable systems have actively solicited community involvement, realizing that local programming will both boost their profits and benefit the town. Too often the communities do not respond to the challenge and settle for the entertainment shows which come through the cable. In addition, many of the communities which are genuinely interested in participation are not prepared to utilize the medium effectively.

Community participation in cable television in New Jersey is still in its infancy. Despite the advances made in some regions, the educational possibilities inherent in Cable TV have hardly been exploited. With the state moratorium being lifted in mid-December, 1972, the time for educators to act is now. Each town, each region of New Jersey is in a different stage of cable television production--considering a franchise contract, becoming operational, or receiving cable service. It is the responsibility of every educator to investigate the status of CATV for his/her district and to become involved in the medium as a vehicle for education. Educational participation in cable television at an early stage will prove greatly rewarding in the not-too-distant future.

RECOMMENDATIONS Educators should be aware of their responsibilities in three phases of the cable television process:

I. Preparing for the CATV contract
II. Writing the CATV contract

III. Using CATV as an effective medium of communication.

Educators must not only protect their own interests in Cable TV, but also inform and protect the general public.

Preparing for the CATV Contract

Any municipality considering the possibilities of cable television must first consider its own current needs, prospects, and problems. Each segment of the community must be surveyed in terms of its present and future communications needs and desires. It is often advisable to enlist the aid of an outside consultant in this process to minimize bias and to insure that all populations are included. It is vital that foresight be used in determining projected possibilities.

At the same time community needs are being assessed, a thorough review of both state and national regulations should be undertaken. Current literature on the state of the art should also be reviewed. A comparison of the rules and regulations to the actual status of CATV in the nation and then finally to the general possibilities of cable television will provide a framework within which to place the individual community.

After a thorough community needs assessment and a detailed review of the literature, public hearings should be held to inform and involve the community. Revising and approving a city ordinance that lays the ground-rules for CATV operation is then in order.

Usually, municipalities arrange with profit-making cable companies to be served; however, some towns may want to consider non-profit or municipal ownership. Privately-owned systems which operate for profit have the ability to raise the necessary capital investment, while municipal governments which are usually already overburdened may find it impossible to acquire additional sources of revenue within a reasonable length of time. Municipal governments, on the other hand, may insure more community representation and can reinvest revenue back into the system. In the case of municipal ownership, it is difficult to provide assurance and protection to the community that governmental ownership will not inhibit freedom of expression.

Sometimes, combinations of public and private ownership are undertaken. Such ventures attempt to offer the benefits of both perspectives of a profit-making business with a non-profit-making branch. In addition, "buyback" agreements can be arranged whereby the municipality has an option to purchase the Cable TV system at a future time. The price of the system in a "buyback" arrangement is usually based on the value of the investment minus depreciation plus a reasonable profit.

Communities are wise to enlist professional help when considering opening themselves to cable television. Too many contracts have been drawn which, through ignorance or oversight on the part of the municipality, contain severe handicaps to the community.

Next, the town choosing to receive bids from profit-making cable companies open their area to bids from the cable firms. It is imperative that the bids are competitive and that the municipality not settle for the first offer.

Writing the Contract

Insuring that the cable system contract is sound, progressive, and equitable to the cable firm as well as the municipality requires much deliberation and attention to detail. The many points to consider are far too numerous to outline completely, but some of the vital ingredients of any franchise contract are the following:

1. *Channel Capacity.* The FCC now requires a 20-channel capacity for new cable systems in the major market area of New Jersey. It is recommended, however, that more than 20 channels be considered. Depending upon the location of the system, a 40-channel capacity is likely to be reasonable. Provision should be made for channel increase as the need arises, and at all times there should be channels available "in excess of demand."

2. *Public Access, Educational, and Government Channels.* Particularly in large municipalities, the one channel allocated by the FCC rules to the public, education, and government respectively is inadequate. The number of access channels should be based on a percentage of the total channel capacity so that as the total system expands, so will the public, educational, and government channels expand. Towns should demand that 50% of the total channel capacity be devoted to public use, and education should be given half of the public channels.

Cable systems should offer the channels for public use at no charge.

3. *Production Facilities.* The public and educational and governmental groups should be allowed to use the hardware of the cable company gratis, and the software should be offered at a reasonable rate.

Minimum standards for production facilities should be established.

4. *CATV Lines.* Drop lines should be hooked-up free of charge to public areas such as schools, libraries, and hospitals.

All persons within the area should be guaranteed access to CATV, and

and all geographic regions within the area to be served should be given access to Cable TV.

5. *Two-Way Capacity.* Bi-directional communication is an essential component of cable television and is now recognized by the FCC rules.

Standards should be set to require at least a ten-key terminal keyboard.

6. *Franchise Limits.* Competitive franchises should be limited to a 10-year contract with an option to reopen the franchise bidding at the end of five years if the community desires. Companies generally recoup their initial capital investment within four to five years after becoming operational. The period following the first five years is extremely important as cable firms are then in a more stable financial state to assist communities in production and involvement.

7. *Public Dividend Plan.* A plan should be established whereby a percentage of the revenues obtained from any non-public use of cable television would be distributed among state and local entities engaged in educational cable television services. Sums of money thus derived would be earmarked for specific purposes (e.g., community involvement, program development, instructional materials, etc.).

8. *Expansion of Facilities and Services.* There should be some provision for the expansion of public services as the company becomes solvent. With the increased prosperity of the system, personnel who assist in community involvement, educational and community program development, and public access should be added to the cable firm's staff. Additional public facilities and materials, such as adequate community and educational studios, production equipment, and a collection of educational software should also be considered as the company becomes financially capable.

Of course, financial records as well as program plans must be available to the public at all times. Town councils should be informed routinely of the status of the cable company.

9. *Affirmative Action.* Public involvement in the development of CATV must be actively encouraged. Affirmative action to include minorities, poor, women, non-English speaking persons, and ethnic groups in the planning and production must be required.

All persons and organizations with the area served must have access to Cable TV time and production facilities.

10. *Educational and Public Involvement in Decision-Making.* Issues relating to cable television must be publicized in order to acquire the input of

the public and special interest groups. In order to insure non-biased coverage of the cable medium, FCC rules ban the local telephone company, national TV networks, and local television stations from owning local CATV stations.

Decisions regarding cable television must include the public and educational interests. Educational and public representatives should therefore be placed on community, state, and national task forces and be expected to testify in congressional and committee hearings. Public input into cable decisions must be as evident as industrial input has been in the past.

Moreover, within each town there should be an ongoing Community Council for Cable Television. Such a council would have policy-making power, rather than mere advisory status, for the various areas affecting community use of CATV. The council should be established as soon as cable television is being considered for the town, and it should continue functioning as long as there is a cable system for that area. The council, which need not be voluntary, should be composed of a representative sample of the population being served, and positions should rotate after several years. The goal of the council should be not only to protect the public interests, but also to maintain liaison with the cable company.

In soliciting applications from cable companies, municipalities should obtain the following from each firm:

1. *A Financial Statement*

   It should be evident that the company is financially in a position to raise the necessary investment capital.

2. *An Ownership and a Management Structure*

   Parent companies, stockholders, and subsidiaries should be disclosed along with an explanation of the company management.

3. *An Engineering Plan*

   A preliminary design of construction should be given in addition to a detailed schedule of completion dates.

4. *A Programming Plan*

   The community should have an idea of what local programming is planned by the operator. Use of facilities and access should be included.

In addition, municipalities should ask for a list of other areas served by

the cable firm and investigate the company's history in other localities.[16]

It should be noted that complete, comprehensive service to the com- cannot be offered immediately. The municipalities and companies will have to allow for equitable arrangements regarding the expansion of the cable service. The suggestions provided herein are made with the understanding that private companies must make a reasonable profit, and that while profits are large five to seven years after becoming operational, the initial years of setting-up a cable system are often profitless.

Using CATV As An Effective Medium Of Communication

Although many New Jersey towns are still in an embryonic stage of cable television development, predictions are that the new medium will soon become a potent force in communications. America is, indeed, gradually becoming wired for Cable TV, and New Jersey will certainly be a vital part of this evolution. Educators must not only participate in the policy-making process which fosters and controls this development, but they must also prepare for the actual utilization of the new medium. Once the cable has been laid and channels and materials have been acquired for community use, educators have a responsibility to understand the capabilities and limitations of Cable TV, to use the medium effectively, and to educate others regarding their potential involvement in Cable TV.

Not everyone in the school system should become an expert in cable television, of course. Teachers, administrators, parents, and students can learn, however, to accept cable television as an efficient method of communication, and they can use the medium capably with the assistance of those who are experts.

Each member of the school system must prepare for cable television. Receptive attitudes and cooperation are essential for designing high quality innovative programming.

Moreover, the school system, itself, must make a firm commitment to cable television. Educators cannot expect the cable company to deliver all of the necessary ingredients for operation of the educational and public channels. Optimum use of the cable system requires financial and personnel support from the schools as well as the cable firm.

In the initial stages of cable television communication in a town, it is wise to experiment with a pilot project, choosing a specific area of interest and a likely target population. For example, and early childhood education program or a continuing education program for senior citizens may be used as the rudimental model for cable television development. From the pilot project conclusions can be drawn regarding the mobilization of

resources in a particular town, the liaison between the school system and the cable company, the receptivity of the audience, the involvement of the community, and the success or failure of the particular project tested.

Cable television *is* a reality. It is operating now in many areas of New Jersey, and in those regions not serviced currently by CATV, it is the likely source of deliberation and negotiation.

The time for action is now. National educational organizations must become more vocal in the debates and decisions of the Congress and the Federal Communications Commission. State organizations should vigorously participate in legislative and administrative discussions. In addition, ongoing dialogue should be maintained with the cable industry, the Public Broadcasting Authority, and the municipalities within the State. Local educators should exert influence not only within their own boundaries but outward to their state and national representatives. The educational community must unite and become involved in the issue of Cable TV to insure the rights of the public and to uphold the educational commitment for maximum quality utilization of cable television.

APPENDIX I

New Jersey Bill To Regulate Cable Television

As a result of the findings of the New Jersey Legislative Study Commission on Cable Television, Senator Harold C. Hollenbeck of Bergen County introduced a bill to regulate Cable TV in the State.

The bill is largely concerned with administrative detail, financial responsibilities, bookkeeping, and liability. An Office of Cable Television is established to be located in the Department of Public Utilities, but the act points out that cable television is not to be defined in New Jersey as a public utility.

The Office of Cable Television is to be administered by a director appointed by the Board of Public Utility Commissioners of the New Jersey Department of Public Utilities with consent of the New Jersey Senate. The director serves until the board chooses to appoint a successor. The director works under the supervision of the Board and must make an annual report to the Board.

A Cable Television Advisory Council is also to be established, consisting of the director of the Office of Cable Television as chairperson, five ex-officio members, and five citizen members. The five ex-officio members are to be:

(1) The President of the Board of Public Utility Commissioners,

(2) The Director of the Division of Consumer Affairs in the Department of Law and Public Safety,

(3) The Executive Director of the New Jersey Public Broadcasting Authority,

(4) The Commissioner of Education, and

(5) The Chancellor of Higher Education.

Citizen members of New Jersey are to be appointed by the Governor. Members are to serve for three years and are appointed on a staggered basis. Citizen members, serving without compensation, are to be chosen from the following areas of interest:

(1) Persons managing or operating CATV systems,

(2) Municipal officials from areas served by CATV, and

(3) The general public.

No more than one person in either of the first two categories is to serve on the Council at any one time.

Article IV of the bill establishes a process whereby a cable system must apply for and obtain a "Certificate of Approval" from the Board of Public Utility Commissioners before constructing, extending, or operating a CATV system. There are several provisions for hearings on the application if it is denied by either the board or a local municipality. The "Certificate of Approval," once obtained by a cable television company, is to be valid for 15 years from the date of issuance and may be automatically renewed for an additional ten year term. In addition to a number of liability clauses in this article, there are provisions for the lending of necessary fixtures and for the access of available conduits for the network.

Article V guarantees that all areas of the municipality will be served by the CATV system, at least within a "reasonable" length of time. It also stipulates that the length of the franchise contract shall not exceed 15 years, but provision is made for an automatic renewal of an additional 10 years. Advice from the State Office of Cable Television may be obtained by municipalities prior to consenting to a franchise contract, but the State will not provide regulation on numbers of channels or types of programming. The article further stipulates that 2% of the gross revenues from the CATV system is to be paid by the cable company to the municipality.

Article VI provides that all CATV systems shall be assessed by the Office of Cable Television and shall pay that office an amount not to exceed 2% of its gross operating revenue.

Article VII encompasses provisions for "safe, adequate, and proper service, equipment, and facilities" of the cable system. In addition, several financial rulings are imposed.

Article VIII deals with violations of the act. Cable system violators who are found guilty, after a hearing by the Board, may be liable to a revocation or suspension of its license. Persons violating the act will be guilty of a misdemeanor, and shall be tried in the Superior Court. Penalties shall not exceed $500, for the first offense, and $1,000, for any subsequent offense. This article also provides an important clause offering immunity to cable companies from suit for "libel, slander, defamation of character, indecency, invasion of privacy or any other cause of action arising from the use of its facilities." This regulation insures the public of its right to communicate freely over cable. There is also a stipulation forbidding owners of dwellings from preventing tenants to receive cable television services.

Beyond the above highlights, the Cable Television Bill concerns itself

largely with applications and miscellaneous fees, general record keeping, finances and reporting of finances, and the processing of complaints.

As with most pieces of legislation involving public rights and regulation of private industry, the Cable Television Bill is in danger of becoming a political football. Some CATV companies feel the act adds more undue regulation to their infant business; some municipalities resent state interference into an area which had been their domain; many educators feel the bill is weak and begs off the issue of public access and educational use of the cable system. Nevertheless, state involvement in the burgeoning industry of Cable TV is both necessary and inevitable, and the New Jersey Cable Television Bill represents a measure of progressive insight on the part of state legislators.

It is regretful, indeed, that educators were not more actively involved in the development of the bill; for, through such involvement there would have no doubt been more reference to educational interests. The fault for such neglect, however, can rest only at the doors of the educators themselves. Certainly, educators should participate more vigorously in their municipal negotiations for franchises than they did in the deliberations of the New Jersey legislature. It is much less difficult to assist in the formulation of policy than to petition after the fact.

It is hoped that the New Jersey legislators will be alert to possible future regulatory needs in the area of cable television. Legislators respond most heartily to the public, however, and educators must become part of the impetus to organize the voice of the people regarding public rights and privileges on the cable.

APPENDIX II

The following excerpts from the February 1972 FCC regulations are of particular interest to New Jersey educators.

FCC Regulations

1. Limitation on the Importation of Distant ETV Station Signals into a Community in the Top 100 Television Markets*

This ruling was made in the interest of protecting local stations from competition with distant stations. The rule states, "The unregulated importation of distant educational signals might both threaten existing local educational stations and also abort construction of new educational stations."

The rule mandates that educational stations within 35 miles of the cable system's community be carried. It further states that distant signals may be carried "in the absence of objection."

2. Non-Broadcast Channels

The FCC confirms that the cost difference between installing a 12-channel capacity is not substantial. The Commission, therefore, requires that a 20-channel capacity be installed in systems within the top 100 markets. It also rules that for each broadcast signal carried, cable systems must provide "equivalent bandwidth for non-broadcast uses."

3. Public Access, Educational, and Government Channels

In an effort to promote the opening up of new outlets for local expression, the FCC is requiring that three channels be set aside accordingly:

(1) One free, dedicated, non-commercial, public access channel available at all times on a non-discriminatory basis.

(2) One channel for educational use.

(3) One channel for state and local government.

The latter two channels are to be available free on a developmental basis for the first five years. After the developmental phase, the FCC intends to re-examine its position regarding whether to expand or curtail the free use of the channels.

4. Two-Way Capacity

The FCC requires that there be built into cable systems the capacity for two-way communications, having determined that the additional cost to install such a component is minimal. There are no specifications regarding the complexity of the bi-directional communication element.

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*New Jersey is within the "Top 100 Market" area

5. Regulations Applicable to Public Access, Educational, Government, and Leased Channels Presenting Non-Broadcast Programming

Stressing that cable television is in a developmental period, the FCC stipulates: "Aside from channels for government uses, we do not believe that local entities should be permitted to require that other channels be assigned for particular uses."

The FCC will consider petitions submitted by both the cable operator and the franchising authority to seek additional channel capacity for public access on an experimental basis.

6. Production Facilities

This vague clause states that "the cable operator maintain at least minimal production facilities for public use within the franchise area." There is no definition of "minimal production facilities," nor is there mention of the costs of such facilities.

7. Applicability

The access rules are to apply to all new systems that become operational in the top 100 markets. Currently operating systems in the top 100 markets have five years in which to comply, and existing systems in markets below the top 100 are required to meet the access rules when the system is substantially rebuilt.

The FCC proposals for the operation of cable television systems in the major population centers of this nation affect all educators. It must be noted, of course, that the new rules do not affect the many already existent franchise contracts under the "Grandfather" clause.

Although the 1972 FCC regulations are setting precedents for future policy and are immediately and directly influencing major patterns of cable communication, educators and municipal governments should regard the rules as merely starting points to developing equitable franchise agreements. There are numerous areas which the FCC fails to tackle, and those areas which are regulated by the new order are representative of minimum standards.

NOTES

1 Stanley Gerendasy, "Cable TV:Revolution in Limbo," Politeia, Vol. I, No. 2 (Autumn, 1971) p.1.

2 ibid p.2.

3 ibid pp. 2-3.

4 Gerald M. Walker, "Special Report:Cable's Path to the Wired City is Tangled," Electronics, (May 8, 1972) p. 92.

5 "A Short Course in Cable," Reprint from Broadcasting, (May 15, 1972).

6 The Center for Analysis of Public Issues, Crossed Wires, (Princeton, New Jersey, 1971) p.9.

7 For example, Vincennes University in Indiana operates two CATV systems in Indiana and two in Illinois. Having acquired a UHF station from a member of its Board of Trustees, the University realized that little commercial investment could be attracted to a station located within a town of only 20,000 population. It was decided that the University should invest in a cable system which would show a profit and could be used, in turn, to support an ETV station. For details, see Cablecasting, "The Vincennes Project: A Study in ETV-CATV Relationships," pp. 23-29, September, 1970.

8 The Center for Analysis of Public Issues, op cit, p. 22.

9 ibid pp. 45-51.

10 New York Times, (December 10, 1968).

11 The Center for Analysis of Public Issues, op cit, p. 63.

12 Interview with Dr. Lawrence T. Frymire, Executive Director, New Jersey Public Broadcasting Authority, (September 15, 1972, Trenton, New Jersey).

13 Center for Analysis of Public Issues, op cit, pp. 27-28.

14 Gabriel H. Reuben, "Using Cable Television to Involve Parents," Cablecasting, (June, 1970) pp. 18-21.

15 ibid

16 For more detailed information, see Theodore Ledbetter, Jr. and Gilbert Mendelson, The Wired City, (Urban Communications Group Inc., 1972) pp. 29-44.

The New Jersey State Department of Education is generally in accord with the philosophy of the authors of "Perspective" papers. However, the views expressed in these papers are the result of planning and research in areas of educational interest, and do not necessarily reflect current policies of the Department of Education.